

Decision No. 6431

ORIGINAL

BEFORE THE RAILROAD COMMISSION  
OF THE STATE OF CALIFORNIA

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CITY OF BRAWLEY, a municipal  
corporation,

Complainant,

- vs -

IMPERIAL VALLEY GAS COMPANY,

Defendant.

CASE NO. 1294

Guy L. Rockwell for Complainant.  
J. Stuart Ross and R. B. Whitelaw  
for Defendant.

BY THE COMMISSION:

O P I N I O N

The complainant in the above entitled matter al-  
leges that defendant has, for several months past, failed  
to supply its consumers in Brawley with sufficient gas for  
their requirements; that on many occasions the pressure in  
the pipes was so low as to preclude delivery of gas, and  
as a result, the inhabitants of Brawley have suffered in-

convenience and loss. Complainant further alleges that it believes the cause of the inadequacy of defendant's gas supply to be due to the lack of maintenance of the plant, which it characterizes as obsolete and inadequate.

Defendant, in answer, admits its occasional failure to supply gas and the inadequacy of its pressure conditions. It alleges that an accident to its boilers and the breakdown of its transmission facilities were responsible for the failure of its supply, this occurring at a time when it was impossible to quickly obtain labor and materials for repairing the damage on account of war conditions, and further, that its operations were hampered by the lack of skilled labor in its plant. Admitting the insufficiency of its service, defendant alleges that the revenue from the sale of gas in Brawley does not justify at this time the increased expenditures for improved conditions, and asks that the complaint be dismissed.

A public hearing was held before Examiner Westover at Brawley, at which time evidence was presented by the parties upon the issues raised by the pleadings, and also upon the poor quality of gas, pursuant to stipulation at the hearing. Evidence was introduced by defendant, and the Commission's engineers submitted the results of an investigation of the gas service in Brawley and also in Imperial and El Centro.

Complainant showed that during the winter abnormally high bills for gas occurred; that during the same period the pressure had been poor and the supply of gas subject to interruption, - in fact, the pressure at Brawley had at times been so low as to result in a complete

failure of supply, with resultant inconvenience to the consumers of that city.

The investigation by the Commission's engineers showed that the failures of gas service in Brawley were due in general to a lack of oil supply, to breakdown in the boilers at the El Centro plant, to a breakdown of the large compressor, to stoppage of mains, and to the interruption necessitated by the repairing of breaks in the transmission main to Brawley. This investigation further showed that the complaints arising from high bills during the winter months were due to the poor service conditions, to the fact that defendant's rates had been raised during the summer of 1918, and to the greater consumption of gas in winter as contrasted with the summer period.

The generating plant of defendant was constructed in El Centro in 1909 and 1910 and service rendered in El Centro and Imperial. Later, in 1912, a transmission main was laid from El Centro to Brawley and service given in that city. The plant at El Centro consists of two oil-gas generators, each of 15,000 cu.ft. per hour capacity, but so arranged that only one can be used at a time; a gas holder of 30,000 cu.ft. capacity, together with a compression tank capable of holding 4,000 cu.ft. of gas under pressure of 70 pounds; a single steam operated compressor unit, with boilers and other auxiliary equipment.

The distribution system in El Centro is of medium high pressure type operating at approximately 36 inches of water pressure. The distribution system in Imperial is

low pressure, supplied through regulators from the El Centro-Imperial transmission line. Brawley, located 14 miles from El Centro, is supplied through a 2-inch high pressure transmission main, the distribution system in Brawley being supplied at a medium high pressure of about  $1\frac{1}{2}$  pounds per square inch. No storage holder is located at Brawley, and at periods of heavy use there it is necessary to maintain a high pressure on the transmission line at El Centro to supply the Brawley demand. In case of any failure of the transmission main, or while making any repairs upon it, the gas supply to Brawley must be completely interrupted. There are approximately 300 consumers in Brawley, 200 in Imperial and 800 in El Centro.

In the operation of the plant all the gas for the entire system is compressed into one tank, from which lead the transmission mains to Imperial and Brawley. The distribution system in El Centro is supplied through regulators from this same compression tank. To supply Brawley through its 14 mile transmission line a pressure in excess of 50 pounds per square inch is maintained during hours of heavy demand. This pressure is far greater than is needed for local distribution in El Centro and results in the unnecessary compression of much of the gas, with an attendant unnecessary expense, and an overloading of the compressor and the boilers supplying steam for it. This arrangement also increases the possibility of interruption of all service if any trouble occurs with the compression equipment.

The failure of oil supply mentioned above was due largely to the shortage of tank cars during the war period. No lengthy interruption of supply occurred how-

ever, as oil was temporarily obtained from the electric plant of Holton Power Company. Defendant should take precautions to see that no failure from this cause shall occur in the future.

The breakdown of boilers was due to their overloading. The present boiler installation is not large enough for the winter demands on this plant, and defendant should install a 150 horsepower boiler without delay.

Interruptions due to compressor failure could have been obviated by the installation of an auxiliary unit as standby. This will not now be required, in view of the plan later proposed for storage holder in Brawley. Considerable relief can be obtained by the installation of a positive booster to supply gas locally to El Centro direct from the holder. This will relieve the compressor of 60 per cent of its present load and will decrease the possibility of failure as well as reducing the load on the boilers.

Some difficulty has resulted from stoppage of pipes. This can best be remedied by systematic inspection and test of the pipes and the proper cleaning of same. The transmission mains should likewise be inspected and tested for excessive loss of pressure and leakage, and all of the pipes put in the best possible condition before the coming winter.

Breaks in the transmission line, and repairs of same, result at present in discontinuance of service to Brawley, there being no reserve supply of gas to distribute during the interruption. Repairs and replacements to the line will become more numerous as time goes on and unless steps are taken at this time to make possible con-

tinuity of service during such times, the condition will necessarily get worse.

Defendant's system is in need of additional storage capacity. The present storage capacity of 34,000 cubic feet is inadequate for a maximum daily output of 250,000 cu.ft. such as occurs. The load in Brawley has already increased to such an extent that defendant cannot supply adequate pressure during the coming winter. Defendant should construct a gas holder in Brawley of not less than 30,000 cu.ft. capacity, and, with consideration for possible growth of the city in the future, a 50,000 cubic foot holder would be more advisable. Such an installation would practically eliminate poor pressure conditions and interruptions to service in Brawley, and would materially reduce the load on the compressors at El Centro. It would be advisable to enlarge the holder capacity at El Centro, but the present necessity for this is partly offset by the installation of a holder at Brawley.

At the present time the heavy load on the compressor at El Centro produces a suction on the lines between purifiers and the compressor, which admits the possibility of air being drawn in and mixed with the gas. Immediate steps should be taken to relieve this difficulty.

Tests upon the gas show a high percentage of hydrogen sulphide, the presence of which is objectionable, and which results from poor operation of the purifiers. Defendant should make daily tests for hydrogen sulphide in the gas and more frequently renew its purifying material to avoid the presence of this impurity.

Defendant is in the same unfortunate position that confronts a number of smaller gas companies at the present time. Because of the marked increase in cost of oil and labor, defendant's earnings have been low, and even with an increase in rates to approximately \$2.50 per 1,000 cu. ft. at the present time, its net earnings show that it is far from prosperous. Defendant cannot, however, expect to continue on a basis of earning even operating expenses, unless it takes steps to improve service to a point that will encourage the continued use of gas.

Defendant owes an obligation to the public to render reasonably good service and if it expects to save its present investment in the property its owners must take immediate steps and make the necessary expenditures to improve service conditions. Otherwise ultimate failure must necessarily result. It is estimated that the changes and improvements required will cost approximately \$25,000, of which \$15,000 covers the storage holder proposed for Brawley. With the completion of the changes ordered herein, which will improve the efficiency of the plant and reduce the use of oil, and with more careful operation and maintenance of the system, substantial savings in the cost of operation will result which will exceed the fixed charges upon the capital outlay necessary for their construction, and the service will be so improved that the consumers will be willing to pay the established rates therefor.

#### O R D E R

City of Brawley having filed its complaint against the Imperial Valley Gas Company, hearing having

been held, the matter being submitted and now ready for decision.

The Railroad Commission of the State of California hereby finds as a fact that the gas service of Imperial Valley Gas Company is inadequate and unsatisfactory, and that the changes in its system and methods of operation set forth in the order herein are necessary and proper for the improvement of said service.

Basing its order on the foregoing findings of fact and upon the other findings of fact contained in the opinion which precedes this order,

IT IS HEREBY ORDERED that Imperial Valley Gas Company be and it is hereby directed:

- (1) To install at its gas generating plant a steam boiler of at least 150 horsepower capacity to be used in connection with the operation of said plant.
- (2) To install a positive blower for the El Centro distribution system and rearrange its lines so as to avoid the compression of gas delivered to El Centro.
- (3) To install a calorimeter of a type approved by this Commission, and to make tests at least three times weekly of the quality of gas supplied.
- (4) To construct a gas holder at Brawley of at least 30,000 cu. ft. capacity together with boosting equipment necessary to maintain supply of gas during periods of low pressure and during ordinary interruptions in transmission.
- (5) To remove the cause of insufficient pressure at the inlet to the compressors, and make the necessary changes to avoid a minus pressure on the purification apparatus and connections.
- (6) To make a complete inspection and survey of its distribution and transmission mains and to hereafter maintain same so as to reduce leakage and stoppage.



(7) To maintain an average quality of gas supplied of at least 560 B.T.U. per cubic foot under standard conditions of temperature and pressure, and to remove by improved methods the present impurities in its gas.

IT IS HEREBY FURTHER ORDERED that the work as set forth in items (1), (2), (3), (5), (6) and (7) above shall be completed within 90 days from the date of this order.

IT IS HEREBY FURTHER ORDERED that Imperial Valley Gas Company shall proceed with the installation of a holder, as set forth in item No. (4) above, within 30 days from the date of this order, and shall complete the same with due diligence.

IT IS HEREBY FURTHER ORDERED that Imperial Valley Gas Company shall submit, on the first day of each and every month hereafter, progress reports on the work herein ordered until such time as this work shall have been completed.

Dated at San Francisco, California, this 25<sup>th</sup>  
day of June, 1919.

Edwin O. Egert

Frank A. Denton

Quincy Weston  
Commissioners.